

Filed 12/26/2003

5. Details of Amendment

(1) The description of "as defined in either one of claims 1 to 10" in claim 12 on page 26 is amended to "as defined in claim 4 or 6".

(2) The description of "as defined in either one of claims 1 to 10" in claim 13 on page 26 is amended to "as defined in either one of claims 3, 5, 7 and 8".

12.(Amended) A method for producing the magnetoresistive random-access memory device using the group III-V compound semiconductor-based half-metallic ferromagnetic semiconductors to provide a TMR element with a switching function based on a rectification effect of the p-i-n type or p-n type low-resistance tunneling-magnetoresistance-effect (low-resistance TMR) diode, as defined in claim 4 or 6, said method comprising changing the concentration of 3d, 4d and 5d transition metal impurities or a rare-earth impurity, or the concentration of a hole and electron, to control a ferromagnetic transition temperature of the ferromagnetic semiconductor constituting said TMR element.

13.(Amended) A method for producing the magnetoresistive random-access memory device using the group II-VI compound semiconductor-based half-metallic ferromagnetic semiconductors to provide a TMR element with a switching function based on a rectification effect of the p-i-n type or p-n type low-resistance tunneling-magnetoresistance-effect (low-resistance TMR) diode, as defined in either one of claims 3, 5, 7 and 8, said method comprising changing the concentration of 3d, 4d and 5d transition metal impurities or a rare-earth impurity, or the concentration of a hole and electron, to control a ferromagnetic transition temperature of the ferromagnetic semiconductor constituting said TMR element at a desired value.

Filed 06/01/2004

5. Details of Amendment

(1) Claim 1 on page 23 is cancelled.

1. (Cancelled)